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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/534,044

11/17/2005

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EXAMINER

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2617

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/534,044	Applicant(s) GOLITSCHKE EDLER VON ELBWART ET AL.	
	Examiner Un Cho	Art Unit 2617	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 05 May 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-37 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-37 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 5/5/2005 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>5/5/2005 & 3/5/2008</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Information Disclosure Statement

1. The information disclosure statement (IDS) submitted on 5/5/2005 and 3/5/2008 have been placed in record and considered by the examiner.

Drawings

2. Figure 1 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Objections

3. Claims 4, 5, 14, 21, 22 and 26 are objected to because of the following informalities:

Claim 4, line 3 recites "signalled", it should recite --signaled-- instead.

Claim 5, line 1 recites "the the data", it should recite --the data-- instead.

Claim 14, lines 1 – 2 recites "a adjustment of the power", it should recite --an adjustment of the power-- instead.

Claim 21, line 4 recites “signalled”, it should recite --signaled-- instead.

Claim 22, lines 7 and 8 recites “signalling”, it should recite --signaling-- instead.

Claim 26, lines 7 and 8 recites “signalling”, it should recite --signaling-- instead.

The examiner kindly requests the applicant to carefully check for any typographical errors.

Appropriate correction is required.

Specification

The following guidelines illustrate the preferred layout for the specification of a utility application. These guidelines are suggested for the applicant's use.

Arrangement of the Specification

As provided in 37 CFR 1.77(b), the specification of a utility application should include the following sections in order. Each of the lettered items should appear in upper case, without underlining or bold type, as a section heading. If no text follows the section heading, the phrase “Not Applicable” should follow the section heading:

- (a) TITLE OF THE INVENTION.
- (b) CROSS-REFERENCE TO RELATED APPLICATIONS.
- (c) STATEMENT REGARDING FEDERALLY SPONSORED RESEARCH OR DEVELOPMENT.
- (d) THE NAMES OF THE PARTIES TO A JOINT RESEARCH AGREEMENT.
- (e) INCORPORATION-BY-REFERENCE OF MATERIAL SUBMITTED ON A COMPACT DISC.
- (f) BACKGROUND OF THE INVENTION.
 - (1) Field of the Invention.
 - (2) Description of Related Art including information disclosed under 37 CFR 1.97 and 1.98.
- (g) BRIEF SUMMARY OF THE INVENTION.
- (h) BRIEF DESCRIPTION OF THE SEVERAL VIEWS OF THE DRAWING(S).
- (i) DETAILED DESCRIPTION OF THE INVENTION.
- (j) CLAIM OR CLAIMS (commencing on a separate sheet).
- (k) ABSTRACT OF THE DISCLOSURE (commencing on a separate sheet).
- (l) SEQUENCE LISTING (See MPEP § 2424 and 37 CFR 1.821-1.825. A “Sequence Listing” is required on paper if the application discloses a

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nucleotide or amino acid sequence as defined in 37 CFR 1.821(a) and if the required "Sequence Listing" is not submitted as an electronic document on compact disc).

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. Claims 1 – 3, 5, 6, 11, 12, 19 – 23, 25, 26, 31, 32, 34, 35 and 37 are rejected under 35 U.S.C. 102(e) as being anticipated by Hakenberg et al. (US 6,792,470 B2).

Regarding claim 1, Hakenberg discloses classifying the data into data entities of different levels of importance (Col. 5, lines 23 – 38 wherein I-frames have higher priority than P-frames), and determining feedback based on at least one data entity of one level of importance (Col. 5, lines 16 – 22 wherein retransmission decision is based on the priority levels assigned to the data frames).

Regarding claim 2, Hakenberg discloses wherein the step of classifying the data entities includes determining which data entities are required and/or are optional to satisfy a service requirement (Col. 5, lines 23 – 38 wherein higher priority frames are required to satisfy a service requirement rather than the low priority frames).

Regarding claim 3, Hakenberg discloses wherein the levels of importance are predetermined (Col. 5, lines 23 – 38 wherein I-frames and P-frames have assigned priorities (high or low)) or conveyed during setup of the transmission.

Regarding claim 5, Hakenberg discloses wherein the data entities of different levels of importance are assigned hierarchical transmission modes in multi-level modulation formats (Col. 5, lines 23 – 38 wherein higher priority frames are transmitted first then the lower priority frames follows in a hierarchal order).

Regarding claim 6, Hakenberg discloses wherein the data entities of different levels of importance are assigned hierarchical parts of the transmission data (Col. 5, lines 23 – 38 wherein higher priority frames are transmitted first then the lower priority frames follows in a hierarchal order).

Regarding claim 11, Hakenberg discloses wherein the data is transmitted using MPEG data compression, comprising frames or pictures having different levels of importance (Col. 3, line 34 through Col. 4, line 9).

Regarding claim 12, Hakenberg discloses wherein the feedback signifies positive or negative acknowledgements of received data packets (Col. 5, lines 2 – 8 wherein a negative acknowledgement is provided as a feedback (NACK)).

Regarding claim 19, the claim is interpreted and rejected for the same reason as set forth in claim 1.

Regarding claim 20, the claim is interpreted and rejected for the same reason as set forth in claim 2.

Regarding claim 21, Hakenberg discloses means for storing criteria which define the levels of importance or for storing the levels of importance, which are signaled from the transmitter (Col. 5, lines 23 – 38 wherein the level of importance is inherently stored in a buffer).

Regarding claim 22, the claim is interpreted and rejected for the same reason as set forth in claim 1.

Regarding claim 23, the claim is interpreted and rejected for the same reason as set forth in claim 2.

Regarding claim 25, the claim is interpreted and rejected for the same reason as set forth in claim 11.

Regarding claim 26, Hakenberg discloses wherein data is transmitted from the transmitter to the receiver (Col. 4, lines 54 – 60 wherein data is sent from a server to a client) and in response to data reception at the receiver, feedback is generated based on the received data (Col. 5, lines 2 – 8), the transmitter comprising means for classifying the data into data entities of different levels of importance (Col. 5, lines 23 – 38 wherein I-frames have higher priority than P-frames), and signaling criteria defining the levels of importance, or signaling the levels of importance, to the receiver (Col. 6, lines 43 – 54 transmitting based on the levels of importance).

Regarding claim 31, the claim is interpreted and rejected for the same reason as set forth in claim 11.

Regarding claim 32, the claim is interpreted and rejected for the same reason as set forth in claim 11.

Regarding claim 34, the claim is interpreted and rejected for the same reason as set forth in claim 2.

Regarding claim 35, the claim is interpreted and rejected for the same reason as set forth in claim 3.

Regarding claim 37, the claim is interpreted and rejected for the same reason as set forth in claim 11.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 7 – 9 and 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hakenberg in view of the admitted prior art (hereinafter APA).

Regarding claim 7, Hakenberg discloses that data are sent from a server to a client. However, Hakenberg does not specifically disclose wherein the communication system is a multi-cast transmission system comprising at least one data transmitter and multiple data receivers. In an analogous art, the APA remedies the deficiencies of Hakenberg by disclosing such limitation on Page 1, Paragraph 0003, lines 1 – 6 and Fig. 1 showing a wireless communication with

multicast transmission. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the technique of the APA to the system of Hakenberg in order to provide an efficient multicast wireless system with feedback to understand a reaction to a certain event based on the transmitted data.

Regarding claim 8, the APA discloses wherein the feedback is transmitted at least from one designated multicast receiver (Fig. 1).

Regarding claim 9, Hakenberg discloses a client device receiving frames having different priorities (Col. 4, line 60 through Col. 5, line 38).

However, Hakenberg does not specifically disclose wherein the communication system is a wireless mobile communication system having a plurality of mobile receivers. In an analogous art, the APA remedies the deficiencies of Hakenberg by disclosing such limitation on Page 1, Paragraph 0003, lines 1 – 6 and Fig. 1 showing a wireless communication with multicast transmission. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the technique of the APA to the system of Hakenberg in order to provide an efficient multicast wireless system with feedback to understand a reaction to a certain event based on the transmitted data.

Regarding claim 27, the claim is interpreted and rejected for the same reason as set forth in claim 7.

8. Claims 4, 24 and 36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hakenberg in view of Mustafa (US 2002/0087716 A1).

Regarding claim 4, Hakenberg does not specifically disclose wherein the levels of importance are dynamically varied during transmission and signaled from the transmitter to the receiver. In an analogous art, Mustafa remedies the deficiencies of Hakenberg by disclosing such limitation on Page 2, Paragraph 0007, lines 1 – 28 wherein the priority levels can be dynamically adjusted and signaled from the transmitter to the receiver. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the technique of Mustafa to the system of Hakenberg in order to provide an effective system and method to support customized multi-priority serves over data link layer frames using single and multiple communication links.

Regarding claim 24, the claim is interpreted and rejected for the same reason as set forth in claim 4.

Regarding claim 36, the claim is interpreted and rejected for the same reason as set forth in claim 4.

9. Claims 10, 13 – 18, 28 – 30 and 33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hakenberg in view of the APA as applied to claim 8 above, and further in view of Love (US 6,148,208).

Regarding claim 10, the combination of Hakenberg and the APA discloses wherein the feedback is transmitted by the multicast receiver for at least one data entity of one level of importance has not been met.

However, the combination of Hakenberg and APA does not specifically disclose wherein the feedback is transmitted only if a QoS criterion for at least one data entity of one level of importance has not been met. In an analogous art, Love remedies the deficiencies of the combination of Hakenberg and the APA by disclosing such limitation in Col. 4, lines 2 – 30 wherein a feedback is generated if the QoS is greatly reduced. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the technique of Love to the modified system of Hakenberg and the APA in order to provide an efficient power control system within a broad-band communication system that adequately controls power in a high speed data channel.

Regarding claim 13, Love discloses wherein the feedback requests control of at least one of the transmission parameters including transmission power, coding gain, modulation, data rate and error probability (Col. 4, lines 19 – 30 wherein feedback information is used in power control).

Regarding claim 14, Love discloses wherein an adjustment of the power ratio between the data entities of different importance levels is effected (Col. 4, lines 2 – 30 wherein adjustment of power ratio is based on QoS).

Regarding claim 15, Love discloses wherein the required data entities will be transmitted with increased power, while the optional data entities will be

transmitted with decreased power, such that the combined transmitted power remains unchanged (Col. 4, lines 2 – 30; acceptable QoS will require increased power for transmission and an unacceptable QoS condition is present when the power level drops to an unacceptable level, thus higher priority data is likely to be transmitted at an acceptable QoS because of their priority and lower priority data is likely to be transmitted even though the QoS condition is unacceptable.

Therefore, it would have been obvious to one of ordinary skill in the art to understand that QoS and power control are closely related to each other in order to maintain a stable and reliable system).

Regarding claim 16, Love discloses wherein for data entities of different importance levels, different modulation schemes are selected (Col. 5, lines 14 – 38 and Col. 6, lines 10 – 18 wherein different modulation schemes are selected based on different importance levels).

Regarding claim 17, Love discloses wherein for data entities of different importance levels uniform and non-uniform signal constellations are selected (Col. 5, lines 26 – 38 and Col. 6, lines 10 – 18; 256-ary Walsh code and a 16-ary Walsh code).

Regarding claim 18, Love discloses wherein the signal constellation employed for modulation is selected such that a desired error resilience of the data entities is translated into the arrangement of the signal constellation points (Col. 5, lines 14 – 38 and Col. 5, line 63 through Col. 6, line 18 wherein modulation is selected based on feedback and QoS).

Regarding claim 28, the claim is interpreted and rejected for the same reason as set forth in claim 9.

Regarding claim 29, the claim is interpreted and rejected for the same reason as set forth in claim 10.

Regarding claim 30, the claim is interpreted and rejected for the same reason as set forth in claim 15.

Regarding claim 33, the claim is interpreted and rejected for the same reason as set forth in claim 9.

Conclusion

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Un Cho whose telephone number is (571)272-7919. The examiner can normally be reached on 8:00AM - 5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, George Eng can be reached on 571-272-7495. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/George Eng/
Supervisory Patent Examiner, Art Unit 2617

/U. C./
Examiner, Art Unit 2617